

533,863  
10/533863

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
21 May 2004 (21.05.2004)

PCT

(10) International Publication Number  
**WO 2004/041023 A2**

- (51) International Patent Classification<sup>7</sup>: **A46B**
- (21) International Application Number:  
PCT/EP2003/012434
- (22) International Filing Date:  
5 November 2003 (05.11.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
0226031.3 7 November 2002 (07.11.2002) GB  
0303468.3 14 February 2003 (14.02.2003) GB
- (71) Applicant (*for all designated States except US*): **GLAXO-SMITHKLINE CONSUMER HEALTHCARE GMBH & CO KG** [DE/DE]; Bussmatten 1, 77815 Buehl (Baden) (DE).
- (72) Inventor; and
- (75) Inventor/Applicant (*for US only*): **GEIBERGER, Christoph** [DE/DE]; DESIGNBUREAU, Castroper Strasse 34, 44628 Herne (DE).
- (74) Agent: **WALKER, Ralph, Francis**; GlaxoSmithKline, Corporate Intellectual Property (CN925.1), 980 Great West Road, Brentford, Middlesex TW8 9GS (GB).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**  
— *without international search report and to be republished upon receipt of that report*
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: TOOTHBRUSH

(57) Abstract: A toothbrush head comprising three widthways adjacent sections in which the tip end of the middle section is enlarged into a bristle-carrying tip pad, there is an intermediate bristle-carrying pad between the tip pad and the base end of the head, with narrow link regions between the pads and the intermediate pad and the handle. The sections are connected to the toothbrush handle by flexible necks. The bristle distribution of a multi-section toothbrush head is thereby optimised.

WO 2004/041023 A2